

## Babcock & Wilcox

a McDermott company

Research & Development Division  
Lynchburg Research Center

P.O. Box 1260  
Lynchburg, Virginia 24505  
(804) 384-5111

May 18, 1981



Mr. Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

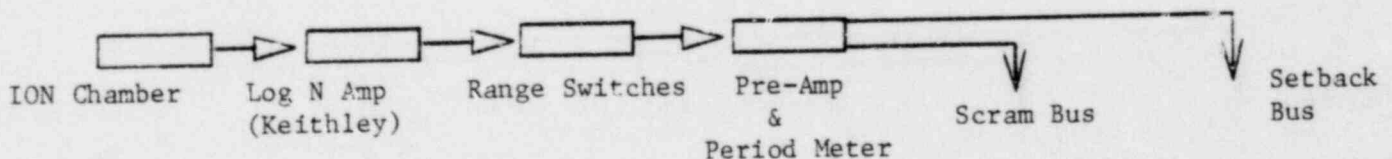
Reference: License CX-10, Docket 50-13

Subject: Improper period channel response

Gentlemen:

This report is being submitted pursuant to the referenced license.

On April 24, 1981, electronics personnel attempted to calibrate the Log N-2 channel on the CX-10. Log N-2 is one of two redundant period channels in the CX-10 safety system. Each is designed to initiate a scram at preset levels. The Log N-2 channel also initiates a setback (rod run-in) if the preset value for period is exceeded. The setback and scram settings are 20 seconds and 13 seconds respectively. In addition, there are two redundant linear power level channels in the safety system. A block diagram of the system is shown below:



During the channel test, a 13 second period was simulated by a linear voltage ramp at the output of the Log N amplifier. The period meter indicated a varying 40 to 80 second period. Further testing has revealed that both the Keithley Log N amplifier and the preamplifier are properly adjusted and functioning normally. No evidence of equipment failure or component degradation has been revealed.

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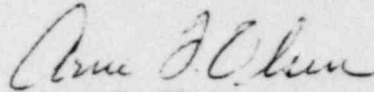
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At this time I am unable to report the cause for this discrepancy.

Operation of the facility has been suspended while the investigation continues. Resumption of operation will not begin until the problem has been corrected and the system is successfully tested. I will inform you of the results of the investigation when it is complete.

Very truly yours,



Arne F. Olsen  
Sr. License Administrator

70:ccf

cc: Ross Butcher  
Region II  
Office of Inspection & Enforcement  
U. S. Nuclear Regulatory Commission  
101 Marietta St., N. W., Suite 3100  
Atlanta, Georgia 30303